# H:\Logo.jpgYear 6 – Summer 1: Electricity and Engineering

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| **Key Theme** |
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| **Key Figure** |
| **Sir James Dyson (b.1947)****British Engineer: Dual Cyclone Bagless Vaccum Cleaner**Second richest person in the UK with an estimated net worth of £23 billion. |





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| **Sticky Knowledge & Skills** |
| * We use scientific symbols to represent the components (parts) of a circuit.
* Circuit diagrams must be based on a rectangle and drawn with a ruler.
* The brightness of a bulb or the loudness of a buzzer is affected by the number of cells in a circuit.
* The brightness of a bulb or the loudness of a buzzer is affected by the voltage of cells in a circuit.
* The number of components in a circuit can affect how they function.
* The arrangement of components in a circuit can affect how they function.
* The length of wires in a circuit can affect how the components function.
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| **Key Vocabulary** |
| circuit  | a closed loop for electricity to travel around |
| cell (battery)  | a stored source of electricity |
| circuit symbols  | an internationally agreed code for recording electrical circuits (see diagram) |
| component  | a part used in an electrical circuit |
| conductor  | an object that allows electricity to flow through it easily (objects made of metal are good conductors) |
| electricity  | a form of energy caused by electrons moving |
| insulator  | an object that does not allow electricity to flow through it easily  |
| motor  | a machine that turns electrical energy into movement |
| switch | a switch turns an electrical circuit on or off by completing or breaking the circuit |
| voltage | a force that makes electricity flow through a wire (it is measured in volts) |

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| **Key Text** |
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| **Links to past learning** |
| In year 4 we learnt about electricity. This was during the COVID isolation period so our practical work was limited. |

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| **Core Value Focus** |
| CuriosityCritical ThinkingResilience |

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| Science (Y4 consolidation) | Science (Y6 new learning) |
| Name 4 appliances that run on electricity:Label this diagram:Name 3 common conductors:Name 3 common insulators:Will this circuit work? Why/why not? | TV, washing machine, wifi, tumble dryer, computer etc.Wires, cell (battery), switch, bulbCopper, aluminium, gold, silverGlass, plastic, wood, rubberNo – the wire is connected to the insulator (glass) not the conductor (metal) | Draw a circuit diagram in which the switch can be used to turn the motor on and off.You **MUST** use these three symbols in your diagram. | Check the following:Circuit drawn with a ruler in rectangular shapeNo gaps in wiresCorrect symbols are used |